

UMv2

Ultra Mini Amplifier Owner's Manual

Models: UM-1200x4Dv2 / UM-1600Dv2

General Features:

- INFINEON Drive Chipset Full Class-D Technology Offers Efficiency & Performance
- Designed Specifically for Car, Motorcycle Applications
- Amazing Ultra Micro Size but Powerful Output for Easy Installations on Everywhere
- Surface Mount Component Technology
- Audio Precision Quality Control Verification
- Stable & Reliable Four Layers PCB Traces Layout
- Power, Protection Led Lights Status Indicator
- Short circuit, Thermal and High/Low Voltage Protection
- Excellent Signal to Noise and FM Noise Rejection
- High Level Input, Low Level Input, Turn On Mode, Input Mode, Load Selectable

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WHERE ARE YOU HEADED?

Thank you for choosing upgraded **NEMESIS / UMv2** amps! Your choice of upgraded **NEMESIS / UMv2** amps indicates a desire for high quality music reproduction in the automobile. upgraded **NEMESIS / UMv2** amps brings to you over four decades of car audio expertise. So, whether you are a daily driving music lover, or a serious car audio competitor, upgraded **NEMESIS / UMv2** amps has the product for you!

To take full advantage of the upgraded **NEMESIS / UMv2** amps gear you have just purchased, please read and follow the instructions in this manual. As with all of our products, professional installation by an authorized **NEMESIS** dealer is highly recommended! Otherwise, the performance of your new gear may not be satisfactory. In addition to the installation services and expertise offered by an authorized **NEMESIS** dealer, the warranty of this product may be extended when installed by an authorized **NEMESIS** dealer. Be sure to ask your authorized **NEMESIS** dealer about whether your product may qualify for an extended warranty.

AT TIMES WE OFFER EXTENDED WARRANTY SERVICES!

You're Headed in the Right Direction with upgraded **NEMESIS / UMv2** amps! Incredibly small size but such great power output will definitely bring you a different entertainment experience!

INTRODUCTION

The upgrated NEMESIS / UMv2 amplifiers offer high quality audio reproduction for the audiophile and the everyday listener, alike. All models feature fully variable crossovers with 12 dB per octave slopes, allowing you the ability to tailor the sound to best fit the speakers and your listening preferences.

Platinum finish connections Harness Ensures solid electrical connections that resist corrosion.

Fully Variable Crossovers Fully variable crossovers promote installation ease and save the cost of outboard crossovers. Additionally, they may be used in conjunction with outboard passive or active crossovers, depending on the complexity required by the system. The 12 dB per octave slope offers steep roll-off above or below the selected frequency.

Protection Circuitry Against Overload, Short Circuit, Thermal, Low Voltage, High Voltage, and Reverse Polarity. These protection features are designed to protect the amplifier from misuse, as well as from common causes of amplifier failure.

INSTALLATION

Professional installation by an authorized **NEMESIS** dealer is highly recommended! Otherwise, the performance of your new gear may not be satisfactory. In the event that you decide to do your own installation, please read and follow this manual very carefully. Failure to do so may compromise the integrity of this product, your automobile, and possibly void the product warranty.

Amplifiers are generally mounted in the hatch/trunk area of a car or SUV, and under or behind the seat of most trucks. Select a location that will provide adequate ventilation for the amplifier. Avoid mounting the amplifier with the fins facing down. The fins should be facing up, either vertically or horizontally. Secure the amplifier with the screws provided.

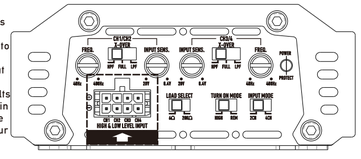
INPUT

Before securing the amplifier, inspect the mounting location carefully to ensure that you do not drill into or damage any electrical, hydraulic, fluid, or fuel lines.

Input Section

Because of the wide range of head unit output configurations all **NEMESIS / UMv2** amps have an adjustable input sensitivity of "Gain". The gain is not a volume or a power limiting control like a throttle. It makes the amp more sensitive to input from the stereo. With the gain up, the amp will reach full output at a lower volume setting on the deck. At higher gain settings the amp also becomes more sensitive to noise from the car's electrical system. Try to run the gain at the lowest setting possible for your system.

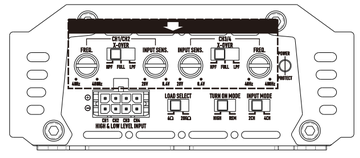
There is no correct gain setting. Because speakers require different power demands to reach the same output, the gains most often need to be used to compensate for these differences. We recommend using oscilloscope when setting input gains on amplifiers to make sure you have clean round sound waves. For example, if you have 5 volts coming from source unit, most likely amplifier gain will be set properly with one or two clicks from the bottom. If you have 1 volt coming into amplifier your gain most likely will be ¾ turn.



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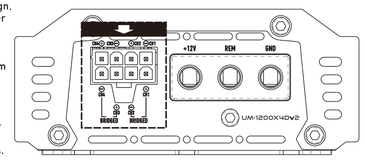
CROSSOVER CONTROLS

A crossover is a device that removes unwanted frequencies from a speaker or amplifier. A tweeter can easily be destroyed by bass notes if they are not filtered out. Likewise, a subwoofer will not sound natural if it is playing midrange notes. A crossover removes these sounds from the speaker. As you might guess, careful adjustment is needed to ensure that all of the speakers are playing the right sounds and that you are left with no nulls" or low spots in the frequency response. You will need to know what frequency response range on your speakers to determine crossover points.



SPEAKER OUTPUTS

This amplifier is a multi-channel amplifier design. Meaning it has more than one channel of speaker outputs. It is equipped with a large block style terminal for speaker connection. Make this connection carefully and neatly. Strip your wire back and twist the exposed leads and insert them into the block terminal while being careful that there is no loose or frayed strands of wire and tighten the Allen head screw down on the terminal till the wire is tightly secured in place. If the wires ever come in contact with each other the amplifier will go into protection. Know your total ohm load before you make any connections.



INSTALLATION INSTRUCTIONS

1. Before you start, disconnect the negative cable from the car battery. Tape up the end so it is isolated from the battery.
2. Run an appropriate gauge wire from the battery to the amplifier. Plan this part of the installation carefully. This cable will carry a very high current. If it should short to the body and it is not properly fused it could catch fire.
3. Connect the power wire to the battery using a fuse capable of the total current load of all amplifiers connected. Don't install the fuse yet. Wait until the end. Locate the fuse as close as possible to the battery. If the fuse is further that 18 inches (wire length) from the battery you should reevaluate the wire and fuse placement.
4. Find the closest clear metal area to the amp for a ground. Sand, grind or scrape all paint and undercoating from the body and screw the ground securely in place. It is advisable to test the ground with an ohm meter between the ground cable and the negative battery cable to insure a good low resistance connection. Some alloys used in modern cars do not offer the best ground. If you believe this is the case, consult with the vehicle manufacturer.

5. Run the speaker wire to the speakers. It is advised that you leave some extra wire at this point. You can "clean it up" later.
6. If you haven't already done so, mount the amp now.
7. Connect the power and ground to the amplifier.
   Only after this step should you install the fuse at the battery.
8. Connect the remote wire, from the head unit, to the amplifier. Now is a good time to turn on the amp for the first time. Make sure it turns on properly and does not go into protection.
9. Connect the speaker wires to the amp and speakers (make sure the amp is off first). Make sure the polarity(+add-) is correct.
10. Connect the RCA'S to the amp.
11. Double check the amplifier controls at this time. Make sure everything is set correctly for your system.
12. Now you're ready to play it for the first time. It is best to leave the gain all the way down at first. Start with the head unit volume low and work your way up.
13. Now you can tune the amp. Take your time and make only one adjustment at a time. It may take some time to get the system fully adjusted. During this time the amp is drawing current from the battery. You should check the battery voltage from time to time and re-charge it if it gets low.

Now you're ready to experience music in its purest form. We are **NEMESIS** Audio... engineered for sound.

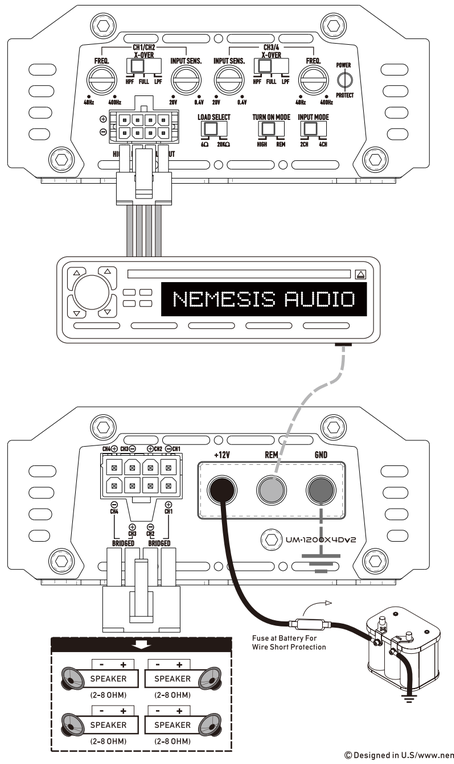
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SPECIFICATIONS

MODEL NO.	UM-1200X4Dv2	UM-1600Dv2
CIRCUIT TOPOLOGY	Full Range Class-D	Mono Class-D
MAX / RMS POWER OUTPUT AT 1 Ω (14.4V & <1% T.H.D)	N/A	1600W / 800W
MAX / RMS POWER OUTPUT AT 2 Ω (14.4V & <1% T.H.D)	300W / 200Wx4CH	1160W / 580W
MAX / RMS POWER OUTPUT AT 4 Ω (14.4V & <1% T.H.D)	200W / 125Wx4CH	720W / 360W
MAX / RMS POWER OUTPUT AT 4 Ω BRIDGED (14.4V & <1% T.H.D)	600W / 400Wx2CH	N/A
TOTAL HARMONIC DISTORTION	<0.3%	<0.3%
S/N RATIO REF 1W AT 4Ω	>90dB	>90dB
GAIN RANGE	0.2V-20V	0.25V-10V
CROSSOVER RANGE	40Hz-400Hz	LPF:50Hz-250Hz
PER OCTAVE SLOPES	12dB	24dB
FREQUENCY RANGE	20Hz-20KHz	20Hz-500Hz
TURN ON MODE	REM & High Level Input	REM & High Level Input
INPUT MODE	2CH/4CH	N/A
LOAD SELECT	6-20K Ω	N/A
REMOTE BASS KNOB	N/A	YES
OPERATION EFFICIENCY	>88%	>88%
EMI REJECTION COMPLIANT	EN50498:2010	EN50498:2010
APPLICATIONS	Car,Motorcycle	Car,Motorcycle
DIMENSIONS (Mounting Feet Excluded)	209.4x98.0x41.4mm 8.24"x3.86"x1.63"inch	209.4x98.0x41.4mm 8.24"x3.86"x1.63"inch

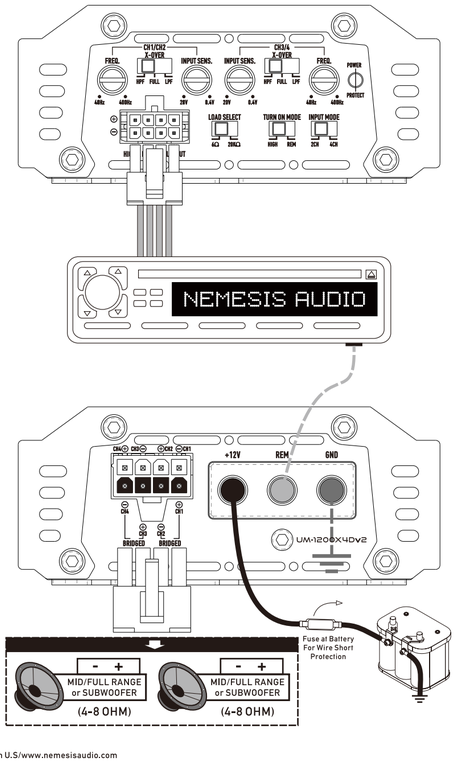
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NORMAL INSTALLATION(**UM-1200X4Dv2**)



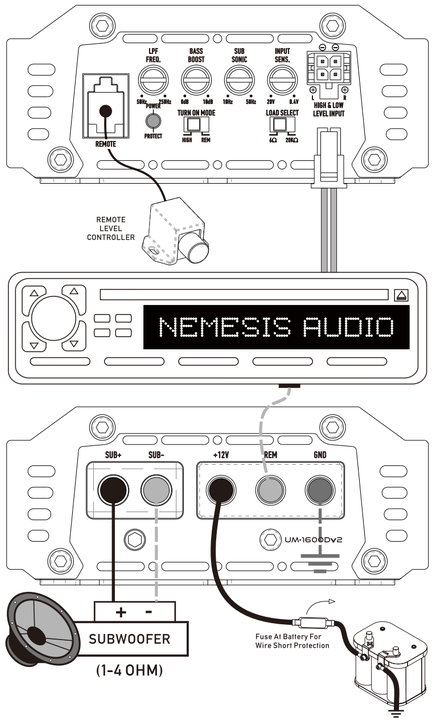
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BRIDGE INSTALLATION(**UM-1200X4Dv2**)



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INSTALLATION(**UM-1600Dv2**)



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WARRANTY

Should your amplifier require service, please consult with the dealer from which it was purchased or contact a local **NEMESIS AUDIO** dealer.
Do not attempt to return your amplifier directly to us. Units received without an accompanying return authorization number will not be processed. Additionally, you must include a copy of your purchase receipt from an authorized dealer for consideration of in-warranty service; otherwise repair charges will apply. Units received without a receipt will be held for 30 days. Allowing us time to contact you and obtain a copy of the receipt. After 30 days, all units will be returned.

NEMESIS AUDIO

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